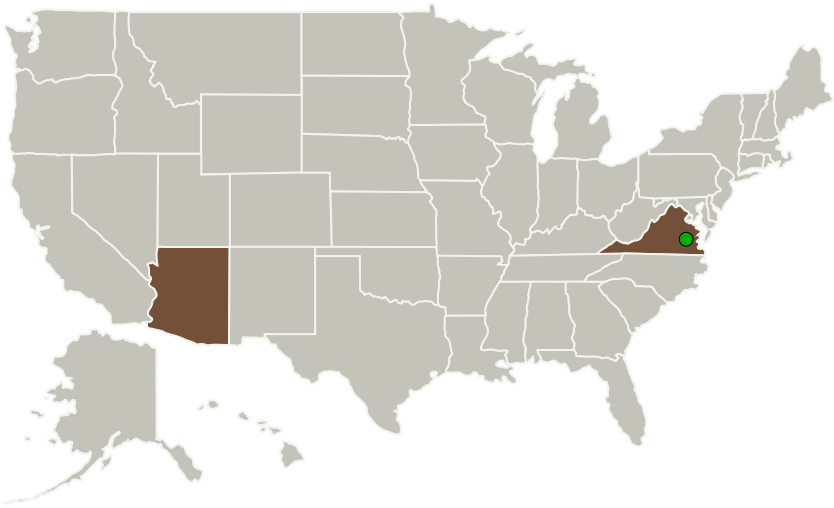
Flexible, Phase Change Fabric for Deployable Decelerators, Phase I

Completed Technology Project (2017 - 2017)

Project Introduction

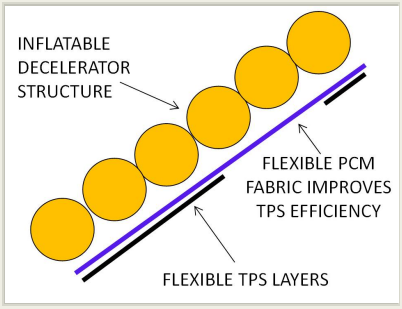
SDMA proposes to develop a flexible fabric containing Phase Change Materials that is suitable for use on Deployable Decelerators. This technology will make Deployable Decelerators substantially more efficient. Previous work at NASA has shown that increasing the thermal capacitance of the structure can make hypersonic vehicles more efficient. SDMA's work will build on NASA's previous efforts by developing practical methods of containing PCM's in a flexible system that withstands the thermal and mechanical mission requirements.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
S. D. Miller and Associates, PLLC	Lead Organization	Industry	Flagstaff, Arizona
Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia

Primary U.S. Work Locations	
Arizona	Virginia



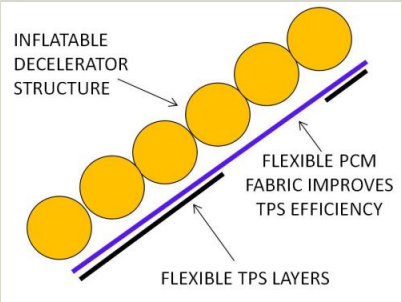
Flexible, Phase Change Fabric for Deployable Decelerators, Phase I Briefing Chart Image

Table of Contents

Flexible, Phase Change Fabric for Deployable Decelerators, Phase I

Completed Technology Project (2017 - 2017)

Images



Briefing Chart Image
Flexible, Phase Change Fabric for Deployable Decelerators, Phase I Briefing Chart Image *(https://techport.nasa.gov/image/132381)*

Organizational Responsibility

Responsible Mission Directorate:
Space Technology Mission Directorate (STMD)

Lead Organization:
S. D. Miller and Associates, PLLC

Responsible Program:
Small Business Innovation Research/Small Business Tech Transfer

Project Management

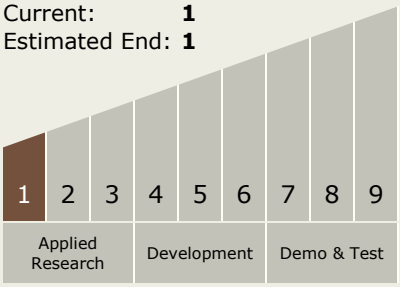
Program Director:
Jason L Kessler

Program Manager:
Carlos Torrez

Principal Investigator:
Stephen Miller

Technology Maturity (TRL)

Start: **1**
Current: **1**
Estimated End: **1**



Flexible, Phase Change Fabric for Deployable Decelerators, Phase I

Completed Technology Project (2017 - 2017)

Technology Areas

Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
  - TX12.1 Materials
    - TX12.1.3 Flexible Material Systems

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System